

PATENT CLAIMS

1. Method of charging a battery at a battery charger comprising connection means for connection to the terminals of a battery to be charged, means for detecting a voltage over the terminals of a connected battery, and control means, **c h a r a c t e r i s e d** in that it comprises the steps of:
 - 5 initiating a burst cycle, wherein a plurality of consecutive voltage bursts are applied to a connected battery to be charged, each burst delivering an amount of charge to the battery and thereby successively lowering the internal resistance of the battery;
 - 10 initiating a charging cycle to charge the connected battery when said burst cycle has been terminated.
2. Method according to claim 1, wherein the charger further comprising means for detecting a voltage of a connected battery, further comprising the step of
 - 15 detecting the voltage over the connected battery.
3. Method according to claim 1, wherein the step of initiating a burst cycle further comprises the steps of:
 - 20 applying a voltage burst to the battery when said voltage over the battery has reached a first predetermined level
 - disconnecting said voltage burst when said voltage over the battery has reached a second predetermined level;
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 - re-applying said voltage burst to the battery when said voltage over the battery has reached the first predetermined level.
4. Method according to claim 2, wherein the step of initiating a burst cycle comprise the step of:
 - 30 applying said voltage bursts with a predetermined offset time between two consecutive bursts.

5. Method of maintenance charging a battery at a battery charger comprising connection means for connection to the terminals of a battery to be charged, means for detecting a voltage over a connected battery, and control means, characterised in that it comprises the steps of:
 - detecting a voltage over the connected battery;
 - maintaining the voltage over the battery at a predetermined level for a predetermined period of time;
 - monitoring a battery capacity parameter when said predetermined period of time has elapsed; and
 - applying at least one voltage pulse if said parameter falls below a predetermined threshold level.
10. Method according to claim 5, wherein said predetermined capacity parameter is the voltage over the connected battery.
15. Method according to claim 5 or 6, wherein the step of applying comprises the step of:
 - applying voltage pulses until the voltage over the battery has reached at least said predetermined level.
20. Method according to claim 8, wherein the step of applying comprises the step of:
 - applying voltage pulses during a predetermined period of time.
25. Computer readable medium comprising instructions for bringing a computer to perform a method according to any one of preceding claims.
30. 10. A battery charger comprising connection means connected to the output lines of the charger, connection means for connection to the terminals of a battery to be charged, means for detecting a voltage over

a connected battery, and control means, characterized in that said control means is connected to said means for detecting and being arranged to execute the methods according to any one of claims 1-8.

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41